Area	Comment	Source	Disposition
Governance	The CTS Advisory Council as a single body will not provide sufficient governance for this effort. The governance should be expanded to include agency business leaders to support business priority discussions and technical staff to support technology design, policy, and standards recommendations. These input from these groups would support and inform the role of the Advisory Council.	DSHS	Project will have separate governance as noted in next steps. Operational governance will be through CAC.
Governance	Customer Advisory Council being the governance body for WAN consolidation? Is this the appropriate place for these decisions?	DOH	The Customer Advisory Council is not expected to provide the governance for WAN consolidation. The project will have separate governance as noted in the next steps. Operational governance will be through the CAC.
Governance	Page 15, Edits in Objective column (underlined blue text) Implement the roles as defined in ESSB 5931 and 5861. • The OCIO establishes enterprise-wide policy, standards and processes; • CTS defines standards, procures, implements, and manages technology infrastructure and network services; • DES procures, implements, and manages enterprise applications; and • The agencies procure, implement, and manage business applications. CTS will continue to use their Customer Advisory	CTS	Changed

Area	Comment	Source	Disposition
	Council for guidance.		
Governance	The proposal points out the need for agency collaboration to successfully achieve the anticipated improvements in planning, standardization, and security. However, it fails to address the methods that will be used to develop this relationship and instead relies on the OCIO to "administer the needed cooperation. Perhaps a greater emphasis on the collaborative analysis needed to create a shared vision such as that used by the shared services initiatives would be a more productive first step.	DOT	Agreed. The details of the collaborative approach will be defined as part of the charter and a working committee to provide governance for the project will be formed.
Current Network Environment	The telecommunication review and assessment appears to be data centric with limited reference to the voice network. In the "Networks managed by CTS" matrix, it is unclear if networks stated include both data and voice circuits. Reference to voice circuits is relevant to VoIP and convergence assumptions.	DSHS	Added references to video and voice throughout document.
Current Network Environment	Reference to today's environment states, "Individual agencies make separate design and buying decisions and administer their own wide area network WAN circuits and equipment." More accurately, this should state "some agencies." In the case of DSHS, CTS is the owner of record for the circuit and there is co-management at the router.	DSHS	Change made to indicate "some agencies."
Current Network Environment	Although ESSB 5891 stated that this report would include a review of cost management, the corresponding data was not included.	DOH	An inventory of contracts and equipment across agencies is required to perform a reliable cost management review.
Current Network Environment	This document does not provide credit to those agencies who are currently managing their WAN	DOH	The assessment of the total cost of operating the WAN infrastructure will

Area	Comment	Source	Disposition
	services efficiently and at a fair cost. Many agencies have dedicated expert-level network engineers who are dedicated to providing professional services in support of their agency missions. History has demonstrated that CTS typically manages their supporting vendors to provide assistance when creating new services or when unscheduled interruptions occur. This vendor support comes at a cost.		take into account the costs of the dedicated expert level engineers as well as the cost of CTS engineers and vendor support in the Next Steps recommended activity "Demand and Financial Management."
Current Network Environment	Standardization of WAN technologies, monitoring, peer support and network security can all be achieved by establishing such standards for agencies to follow.	DOH	As this is not an option that ESSB 5891 requested be assessed, it will be reviewed as part of the recommended next steps as part of the "Simplified Network Architecture."
Current Network Environment	A centralized approach for WAN provisioning and management can provide value to all customers. This is true but it does require proper execution and planning. CTS has not gained the trust from agencies that they can take this concept and achieve the stated objectives.	DOH	Agreed that it requires proper execution and planning. This will be addressed in the recommended next steps as part of the "Efficiency of Service." SLA reviews will document the success of the approach.
Current Network Environment	Is there any data or information available to back up these claims in the document? • Agency WAN infrastructure "is not currently managed as a critical asset." • Agency WANs are not "manageable, reliable, and cost effective." • Agency WAN management is a "hindrance to solid security, business continuity, and disaster recovery."	DOH	Analytical data will be included in the detailed analysis recommended as part of the next steps.

Area	Comment	Source	Disposition
Current Network Environment	Page 3: Table edit (underlined blue text): State Metropolitan Optical Network (SMON) — This high-speed fiber optic backbone service connects voice, video, and data communications for customers located in over 30 buildings on the state Capitol Campus in Olympia and throughout Thurston County.	CTS	Changed
Current Network Environment	Page 4 added text under diagram: Figure 1 is showing in many cases that CTS manages the majority of WA States wide area network and the routers at the agency remote sites. It also shows that there are agencies that while they have connectivity to the states resources they fully manage and maintain their own wide area networks and routers at their remotes sites. It also is showing that in many cases where CTS may manage the circuit to an agency the agency manages the router at their location.	CTS	Added with some edits.
Goals and Expectations	Page 8: "Each organization within the State needs to focus on those activities that are within their organization's primary responsibilities:" Clearly state that OCIO is responsible for state-wide policies and standards not for selecting what technology products CTS is to use. Be sure the	CTS	Incorporated

Area	Comment	Source	Disposition
	descriptions and bullets match the WAC.		
Goals and Expectations/Financial Alternatives	The proposed implementation of a single provider for all WAN services and the use of an agency allocation cost recovery approach is contrary to the mission of CTS • "The mission of CTS is to provide innovative technologies and support to customers through competitive services that deliver measurable value in order to be the information technology provider of choice for agencies in the state of Washington."	DOT	Section 736 of ESSB 5931; in establishing CTS gives them responsibility for ""utility-based infrastructure services" includes personal computer and portable device support, servers and server administration, security administration, network administration, telephony, e-mail, and other information technology services commonly utilized by state agencies."
Goals and Expectations/Financial Alternatives	Concerns around moving to an allocated model vs. a fee for service. Agency needs are very diverse and agreeing to the proposed allocated model would require that some agencies not being treated fairly in the costs that are passed to them.	DOH	The current recommendation is to implement a tiered allocation in order to fairly treat agencies with differing needs.
Strategies for Managing State-Wide Networks	To achieve standardization does not require consolidation. This document suggests that it does.	DOH	Standardization is only one aspect of the recommendation. Consolidation is a straight-forward approach to achieve the requirements of ESSB 5931.
Strategies for Managing State-Wide Networks	Is there data to show the percentage (or the actual agencies) that are not properly managing their capacity, reliability, or security? Similar concern around the statements relating to network monitoring, provisioning abilities, security management, and vendor management.	DOH	Analytical data will be included in the detailed analysis recommended as part of the next steps as it can be obtained from agencies.
Strategies for Managing State-Wide Networks	Many private-sector entities include financial penalties to WAN circuit providers for failures to comply with the	DOH	Details of the new SLAs will be developed during the recommended

Area	Comment	Source	Disposition
	SLA. CTS SLA's per this document include only compliance reviews and escalation processes for failures to comply. Does CTS intend to avoid any financial penalties for breaching SLA's with agencies?		next steps "Demand and Financial Management." Options will be reviewed during this work effort.
Strategies for Managing State-Wide Networks	Should agencies have a concern that CTS wants to manage agency perceptions of CTS services through SLA's, instead of working to achieve customer satisfaction through creating a high-quality product that reduces agency costs?	DOH	SLAs are suggested as a documented means to assure agencies that CTS provides a high-quality product that is cost effective.
Strategies for Managing State-Wide Networks	What are the costs/benefits of standardizing firewalls? How and why does this relate to statewide WAN development/management?	DOH	Standardizing firewalls and their placement is recommended as a security and management improvement.
Strategies for Managing State-Wide Networks	"When disparate technologies, multiple vendors of each of the components, and additional hand offs of responsibility enter the already complex environment, time to resolution and the resulting cost to the organization increase substantially" – Is there any data that reflects these time/money costs to state agencies, and is there any data that demonstrates the value of CTS provided services as reducing these costs?	DOH	Analytical data will be included in the detailed analysis recommended as part of the next steps as it can be obtained from agencies.
Strategies for Managing State-Wide Networks	CTS states that the new WAN may "potentially provide … better price points with vendors" but historically CTS has been 100-500% more expensive than vendors agencies have contracted with directly	DOH	Analytical data will be included in the detailed inventory analysis recommended as part of the next steps as it can be obtained from agencies.
Risk Management	Concern around this statement - "The OCIO needs to administer the needed cooperation from the agencies if it is found to be lacking." Does this mean that agencies will be forced to move regardless of	DOH	ESSB 5931 requires CTS to develop a migration strategy to ensure that, over time, all state agencies are moving toward using CTS for all utility-

Area	Comment	Source	Disposition
	cost/value/benefit?		based infrastructure services. The recommended next steps will address this requirement.
Risk Management	The "Risk of Doing Nothing" is a broad generalization that is not backed up with any supporting data or information in the document	DOH	Analytical data will be included in the detailed analysis recommended as part of the next steps as it can be obtained from agencies.
Recommended Future State	As written, the proposed state makes it difficult to determine the delta between today and the future state. DSHS today, for example, closely aligns with what is being proposed. Today, DSHS works closely in the following areas mentioned in the network study: • **Standardized WAN Technologies.** DSHS consults with CTS when designing and planning WAN technologies, using technologies that meet current OCIO and CTS standards. • **Centralized Procurement.** DSHS procures all circuits through CTS, leveraging the state's master contract to acquire equipment in alignment with CTS' installation base. • **Integrated End-to-End WAN Management and Monitoring.** DSHS works closely with CTS to manage and monitor the WAN end-to-end. The significant difference between the DSHS current model and the study applies to the WAN	DSHS	Added clarity as suggested. Changed firewall to router as agreed with team.

Area	Comment	Source	Disposition
	demarcation point at DSHS remote offices. The study proposes a shift of the demarcation to the LAN site, positioning CTS to solely manage the WAN demarcation point. In a distributed administration model like DSHS, this could position ISSD in a *different* support role with limited visibility. This will likely increase agency staff costs and impact SLA response times as seen in previous consolidation efforts. • **Co-Lo Design Roles.** In terms of capacity planning at remotes sites, this role has been done by the agencies. It is unclear what CTS' new role will be. It is also unclear what CTS' role will be to facilitate the sharing of network resources at physical locations with multiple state agencies. Currently, coordination falls to the agencies, primarily due to lack of CTS resources and clarity of roles. DSHS has been working with CTS, DEL, and ESD for the last two to three years, aiming to standardize the sharing of network resources and reduce duplicate costs where multiple agencies are located in the same physical location. Lack of CTS staff resources has been the biggest obstacle with this effort. Advancement in this area would be a fairly easy first step of this study with significant cost savings. In the recommended future state, proposed strategies		

Area	Comment	Source	Disposition
	state "industry best practice" with limited, high-level goals specific to the statewide environment. Due to the limited detail, the proposed 'to be' state in comparison with today remains unclear. To strengthen the proposal, the following examples suggest where more detail is required: • **Consolidation Strategy.** Proposed 'to be' diagrams reference firewalls at remote WAN sites. This is NEW, introducing additional equipment and roles. Specific to the existing infrastructure, it is unclear if CTS' role is limited to hardware management or will result in sole CTS administrative responsibility at remote WAN sites. This demarcation is important to understand in terms of the shared architecture, the support model, and staffing impacts at the agency level. • **Roles/Responsibilities.** Further clarification to distinguish CTS and agency roles is needed. One suggestion is to illustrate/document roles with a visual diagram similar to the illustration on page 8 of 30. As an example where more clarity is needed: Currently, CTS is not actively engaged in remote site capacity planning; responsibility falls to the agency. It is unclear how or if this role will change. One key assumption (and question) is if CTS will be positioned as an end-to-end		

Area	Comment	Source	Disposition
	solution provider with SLAs aligned accordingly. • **Monitoring.** There is a pending emphasis on monitoring (agency visibility requirement). No detail is included in the goals stated. In the network study, it is mentioned CTS would better be able to provide pro-active network management and monitoring. CTS does very little if any of this currently due to limited staff resources and limited network management and monitoring tools. To improve in this area CTS would need a substantial investment in both network tools and staff resources. Agencies would need at least the current level of staffing if not more staffing to provide the necessary continuous analysis to CTS. • **QoS.** Specific to QoS, it is important to clarify the current state to help inform future state. Currently, vendor contracts managed by CTS do not include the QOS option. Current QOS focus is at the end points. Unclear what the future vision is. • **Agency Focus.** The assumption is that agencies should focus on agency business applications. While this is true, centralization with a distributed administration/support model also requires that agencies focus on		

Area	Comment	Source	Disposition
	LAN/desktop environments, including mobile/wireless solutions. • **Gap.** The document does not address disaster recovery for remote sites. • **Customer Service.** The document theme implies service improvements. While some of this may be true, experience to date suggests that service response times tend to increase, and customers see a change in the level of customer service. • **Timing.** The vision of DSHS is to consolidate the DSHS network into the CTS network. Because of timelines associated with moving the OB2 data center to the new State Data Center, there are CTS staffing constraints to perform the planning and engineering DSHS requires to accomplish proposed consolidation prior to the mandated date of June 30, 2015 to shut down the OB2 Data Center. With the current staffing model, proposed consolidation will need to start after June 2015.		
Recommended Future State	IGN section. For starters, the definition of the IGN *could* be a little clearer. More importantly, the IGN network is not considered a trusted network by either CTS or other agencies as mentioned in the network study. The IGN network has not been re-architected since inception in 1996 and no longer meets the	DSHS	Agreed

Area	Comment	Source	Disposition
	network demands of its customers. It is not financially sustainable, and CTS is subsidizing this network at about $40k per month. There is currently a work effort underway between CTS, state agency anchor IGN tenants, counties, cities and tribes to re-architect this network. The IGN network could be brought into better alignment with this study during this re-architecting time.		
Recommended Future State	The following three areas mentioned in the assessment will need considerable work to meet agency requirements and expectations, allowing agencies to strategically align with CTS: 1. Provide business related, transparent WAN service descriptions, and costs to support early and more accurate cost predictability. 2. Document the CTS WAN service delivery methods and capabilities. 3. Document an accurate financial cost baseline with defined elements.	DSHS	Agreed
Recommended Future State	The level of control, administration, and authority CTS is proposing to implement on endpoint routers is unclear from the document.	DOT	Added clarity within the document although detail will not be available until Planning is complete.
Recommended Future State	From our analysis of what is being proposed, we can see no cost savings to the Department of Corrections at any of our sites. Our major sites are campus area networks with complex routing, TCP acceleration, and network security (firewalls) for the life safety systems within our campus networks. That means under all circumstances, we would have to maintain ownership of, and administrative control of, our Core routers and	DOT	Cost savings is not the core of the report and recommendation, although cost effectiveness is a target. The focus is on improved state WAN manageability from end-to-end. Details of policy delegation will be determined during Planning.

Area	Comment	Source	Disposition
	firewalls for that site. This is true of all of our sites regardless of size due to our internal standardization policies. CTS would need to also place a WAN router and firewall at these sites to implement their standardization policy. Not only would there be no cost savings, but there would be both significant upfront capital expenditures for hardware by CTS and ongoing operational expenses that do not exist at present.		
Recommended Future State	Statements made regarding the effective management provided by CTS and the comparatively poor management provided by other agencies is not supported with factual data. For example, the results of the Gartner study are used to imply a large gap between the costs of CTS provided services and those of the agencies when in fact it presents the collective performance of the state against its peers. When you look at it from this perspective, it challenges the validity of many of the assertions made throughout this document. Please consider including all of the available data in a more accurate and objective manner.	DOT	Detail will be added and the assertions reviewed and potentially revised as the nest steps analysis is performed.
Recommended Future State	The assumption that a utility data network service is capable of meeting all of the agencies business requirements without having collected and analyzing them may create unrealistic expectations of the service. For example, WSDOT manages data network connectivity that terminates in roadside and vessel locations that may require specialized equipment because of environmental or physical constraints.	DOT	Agreed. This is why the inventory is recommended as a next step.

Area	Comment	Source	Disposition
Service Level Agreements (SLA)	The existing DSHS SLA with CTS is very high level and lacks performance measures. The SLA philosophy will need to shift to include more detail to ensure end-to-end performance. Suggestions include: performance measures; support demarcation points; detailed cost models, and communication strategies regarding future enhancements and/or changes to the network to help agencies prioritize and stay in alignment with CTS' roadmap.	DSHS	Agreed. Working with agencies, new SLAs will be created during Planning.
Staffing Impact	CTS will need more staff. Current demands and dependencies on CTS staff have resulted in significant planning and schedule delays. Activities proposed in this assessment will impact the same staff.	DSHS	Resource requirements will be determined during Planning.
Staffing Impact	Agencies will not see a reduction in staff. As DSHS has seen with other consolidated services, DSHS will ***not*** likely free up any significant staff time. DSHS job duties will likely change to some degree, moving to a less hands-on support role for the WAN. Instead, an increased support role is anticipated in the areas of consulting, planning, and continued partnering with CTS to address DSHS network requirements and performance requirements.	DSHS	A process to support capacity planning and performance management will be defined during the process in an effort to reduce the overhead associated with these activities.
Staffing Impact	To truly understand feasibility and agency impact, further detail is needed in terms of roles and responsibilities. Impact assumptions based on previous consolidation efforts includes the increased need for monitoring tools/visibility, increased support/coordination roles, and an added complexity in communication.	DSHS	Agreed. This will be accomplished as part of the Planning.
Cost	Potential concern regarding the allocation model in	DSHS	Agreed

Area	Comment	Source	Disposition
	relation to actual consumption.		
Cost	The proposed funding model (cost allocation) does not have the flexibility required to implement network enhancements (sometimes called new services) required to meet changing and increased agency business demands in a timely manner partially due to the recommendation that rates only cover the depreciation of the assets and not the capital outlay of the asset (trying to meet federal cost recovery requirements). This proposed funding model would also require CTS to completely revamp the current network cost model and could result in significant changes to charges to agencies. Agencies have already and are continuing to make long term decisions based on current charges. This could have a significant impact on agency budgets and require additional funding for the agency to meet these costs. An FTE cost allocation could impact DSHS due to the large number of institutional workers that do not use the network.	DSHS	Clarity is required. It is only the Federal funding component that excludes the capital outlay. Detail will be examined and suggested during Planning as the inventories and high-level architecture are completed.
Cost	Historically, costs do not stay neutral or go down as assumed, as just seen with the DSHS MPLS connections.	DSHS	Cost effectiveness rather than cost reduction is the goal of the recommendation.
Cost	Likewise, agency staffing costs will not decrease with consolidation. Quite likely, staffing costs will increase due to modified support roles and added complexity. Consolidation at the CTS level introduces another layer of complexity in larger agencies like DSHS. Since DSHS is decentralized with reliance on	DSHS	Support and planning roles will be defined during Planning which will document assumed time requirements of agency staff.

Area	Comment	Source	Disposition
	ISSD as a central provider, further consolidation introduces cost increases. Agency cost increases are directly tied to staffing impacts mentioned above.		
Cost	The study mentions increased funding requirements for one-time costs. Based on previous IT service consolidations, the agencies will likely need increased ongoing funding as well.	DSHS	Agreed to be likely as network costs are not fully funded today.
Cost	The assessment states VoIP assumptions. DSHS has many voice systems to consider. Previous documentation has stated VoIP cost savings assumptions. It is important to point out that this has not been the case.	DSHS	Agreed. No VoIP cost savings are assumed in this report.
Cost	Note: Not sure of the wired vs. wireless strategy implications. Consolidation is directly related to wired solutions to the building, not wireless at the remote site/building.	DSHS	Will be reviewed as the actual scope is determined.
Cost	Only a metered approach to cost recovery provides the visibility required to evaluate performance and the threat of competition provides the only practical available remedy for agencies that are underserved. The proposal of replacing this incentive with an inter-agency agreement cannot be reasonably considered as an effective alternative.	DOT	Will be considered as the cost/benefit analysis is performed.
Strategies for Managing State-Wide Networks	Page 9: Edit (underlined blue text): By standardizing and extending the centralized management of the WAN through to the point of demarcation at the agency's physical location, the ability to monitor information and to obtain the	CTS	Changed

Area	Comment	Source	Disposition
	detailed data that is required for proactive fault avoidance is made easier.		
Funding Alternatives	Page 19: “Because CTS competes with the private sector with many of its services, it has a vested interest in providing the best value and actual cost for the service provided, and has compiled a good record of accomplishment for this measure.” Do we really want to say that CTS "competes" with the private sector? How about something like: "Because agencies can choose to acquire infrastructure services from the private sector, CTS is motivated to provide . . . “	CTS	Changed
Funding Alternatives	Page 19 edits in underlined blue text: It is currently estimated to take approximately three years to accomplish from the funding date along with the other initiatives that are currently underway within both CTS and the agencies.	CTS	Changed
Funding Alternatives	Page 19 edits in underlined blue text: The logical demarcation point is the router or firewall at the physical premise. CTS then plans, engineers, and manages anything on the network until it arrives at or leaves the premise. This maintains the agency focus on their business needs and the CTS focus on the delivery of the telecommunications utility.	CTS	Changed to “router” as agreed by the team.

Area	Comment	Source	Disposition
Feasibility and Cost/Benefit	Page 23: "Improved availability and reliability" is repeated for both Efficiency and Effectiveness. Pick one	CTS	Changed. Changed to "router" as agreed by the team.
Recommendations	Page 26 edits in underlined blue text: The overall recommendation is to complete the consolidation of the state WAN though the router or firewall to each agency location.	CTS	Changed. Changed to "router" as agreed by the team.
Recommendation	Page 26 edits in underlined blue text: • **The Department of Enterprise Services (DES):** Responsible for developing and operating enterprise applications and master contracts and grants ~~CTS~~ master contract authority to CTS for technology infrastructure and network services	CTS	Changed
Create Consolidation Planning Roadmap	Page 28 Simplified Network Architecture row, Responsible column comment: • OCIO Review What is OCIO reviewing? We would inform and consult with OCIO all along the way, and they are already represented on the CAC. Calling this out here implies that OCIO has some responsibility for WAN	CTS	Changed

Area	Comment	Source	Disposition
	architecture.		
Create Consolidation Planning Roadmap	Page 29 Project Planning row, Responsible column comment: • OCIO review Here the OCIO has a defined role in approving and monitoring IT projects.	CTS	Added
Create Consolidation Planning Roadmap	Page 39 edit in underlined blue text: CTS, through its Customer Advisory Council, will continue to collaborate with agency representatives to govern the infrastructure and state WAN to achieve their agency goals.	CTS	Changed
Create Consolidation Planning Roadmap	There has been little or no inclusion of agency network architects in the discussion of this proposal. We do not have a good insight into how this may impact Department operations or how the change may affect the complexity of how our network is configured.	DOC	Agency discussion will be requested during Planning as part of the Next Steps.
Create Consolidation Planning Roadmap	Concern that agency needs will be second to the overall objective of WAN consolidation. How will the agencies be heard through this process or will CTS solely look at the numbers?	DOH	During the recommended next steps activity to initiate the project, the mechanism for agencies to participate and provide input will be defined as part of the creation of the project charter.